INDEX TO CORRESPONDENTS.

A. A. B., 27, 83.
Abbet, E. P., 529.
Abbott, C. N., 167.
Adams, Willis, 597.
Alderman & Roberts, 98.
Alexander, C., 439.
Alexander, Mr., 146.
Allen, Dr. N. P., 40, 50, 97, 197, 284, 329, 429, 500, 507, 514, 516, 551.
Allen, Joseph, 40.
Allen, Ransom, 245, 430.
Allen, W. C. B., 191.
Alley, Henry, 96, 170, 175, 197, 214, 220, 237, 446.
Alsike, 325.
Anderson, J., 429, 503.
Anderson, J., 429, 503.
Anderson, J. 12, 88, 436.
Andrews, W. J., 10.
Antrim, L., 577.
Arro, R. M., 22, 42, 79, 240, 318, 551.
Armitage, W. H., 368.
Armstrong, B., 438.
Arnold, D. J., 194.
Ashverth, Rev. W. J., 153, 201, 215, 277, 577.
Austin, James A., 217, 339, 426, 529.
Averill, B. F., 578.
Aydelotte, J. W., 508.
Allow, M. L., 80, 436.

Aylor, R. L., 80, 436.

Bacon, R., 432, 499, 532.
Bagby, E. A., 282.
Balley, M., 426.
Balley, M., 426.
Balley, M., 426.
Balley, M., 426.
Baker, E. R., 486.
Baker, L. B., 215, 277, 577.
Baldridge, M. M., 135, 167, 332, 355, 366.
Baldwin, P., 24.
Ballentine, Rev. W., 392.
Balles, M., 411.
Ballou, Addle L., 487.
Banner, R. 1, 551.
Barnum, B. B., 443, 507.
Bartrum, R. B., 483, 507.
Bartrum, R. B., 483, 507.
Bartrum, R. B., 483, 507.
Bartrum, R. J., 296.
Bassett, J. P., 440.
Battles, I. S., 337.
Beanl, Drof. W. J., 344, 501, 502.
Bean, J. W., 284, 507.
Bean, M. C., 296, 571.
Benedict & Newman, 220, 477.
Bennett, R. J., 28, 348.
Benton, Frank, 10, 52, 213.
Benton, Miss D., 569.
Bertrund, Mons Ed., 11, 15, 74, 101, 363, 512.
Betsinger, N. N., 145.
Beyer, J., 215.
Betsinger, N. N., 145.
Beyer, J., 215.
Biller, J. G., 44, 473.
Billing, P., 440.
Billing, P., 447.
Billing, P., 440.
Billing, P., 447.
Billing, P., 448.
Billing, P., 449.
Billing, P., 440.
Billing,

Bittenbender, S., 291.
Bitser, Wm., 439.
Blackburn, H., 457.
Blackburn, Mr. 279.
Blanchard, M., 477.
Blanchard, O. C., 434, 472.
Blanton, Dr. O. M., 406, 426,

Bunchard, M., 477.
Blanchard, O. C., 434, 472.
Blanchard, O. C., 434, 472.
Blanton, Dr. O. M., 406, 426, 457.
Bledsoe, O. F., 97.
Bledsoe, O. F., 97.
Boardman, H. R., 516.
Boerstler, J., 51, 415, 431.
Bogart, E. F., 59, 339.
Bolling, W., 343, 581.
Bognart, E. F., 59, 339.
Bolling, W., 343, 581.
Bonham, L., 377.
Boombower, F., 435.
Bourgmeyer, John, 51.
Bourne, Mr., 411.
Boutelle, D. K., 569.
Bowditch, F. C., 474.
Bowen, Erastus, 162.
Bryd, C., 392.
Bryd, C., 392.
Bryd, C., 392.
Bradish, C. W., 478.
Bray & Sencord, 266.
Breed, J. E., 39, 151.
Bristol, S. S., 428.
Brooks, J. M., 36, 181, 214.
Brown, G. J., 502.
Brown, Dr. J. P. H., 359, 515, 521.
Brown, Dr. J. P. H., 359, 515, 522.
Brown, Dr. L. E., 507.
Bryant, B. F., 468.
Burch, H. A., 194, 221.
Burdick, J., 434.
Burgett, W. B., 49.
Burnett, H. G., 197, 528.
Burnett, W. W., 314, 331, 418, 427.
Burrell, H. D., 463.
Burt, C. S. 94, 991.

Collins, Samuel, 507.
Collins, W. T., 13.
Colt, B. F., 598.
Conk Bi, F., 598.
Conk Bi, F., 598.
Coley, O. E., 239, 435.
Cook, P. Cook, P.

Curtis, O. B., 473.

Padant, Ch., 127, 141.
Dadant, C. P., 288, 381, 488.
Dart, R., 33, 425.
Dart, R., 33, 425.
Dart, R., 33, 425.
Dart, R., 33, 425.
Dart, R., 347.
Davis, A. J., 502.
Davis, A. J., 502.
Davis, J. D., 40.
Davis, J. D., 40.
Davis, J. D., 40.
Davis, J. J., 408.
Davis, J. J., 408.
Davis, J. J., 408.
Davis, W. J., 200, 529.
Dean, C. H., 525.
Decrow, J. B., 412.
Delair, E., 363.
Delair, E., 363.
Delair, E., 363.
Delair, W. B., 38.
Delair, W. B., 38.
Delair, W. B., 38.
Delair, W. B., 38.
Demarce, G. W., 382, 520.
Dennier, Mons., 11, 15, 217.
Detwiler, W. B., 38.
Detter, A. A., Jr., 477.
Dibbern, C. H., 433.
Diehi, L. J., 312.
Dilliey, A. D., 415, 581.
Dilliman, S., 38.
Dipman, John F., 477.
Dirwanger, J. A., 50.
D. J. W., 427.
Dodger, G. W., 267.
Dodge, J. E., 183, 512, 521.
Dodge, S. C., 183, 512, 521.
Dodge, S. G., 183, 512, 521.
Dodge, J. G., 367, 420, 432, 462, 481, 505, 565.
Donley, J. W., 432.
Dougherty, F. L., 103, 275, 577.
Drane, Dr. E., 153, 268, 437, 507. Drane, Dr. E., 153, 268, 437, 507.
Drory, Edward, 11.
DuBois, L'Abbe L., 15, 340.
DuBois, M. D., 476.
Duncan, Dr., 510.
Duncan, J., Jr., 149.
Dunbam, Mrs. F. A., 216, 220, 224, 241, 463.
Dunken, P., 96, 388.
Dunn, Thomas, 291.
Durbam, T. H., 50.
Dyer, Wm., 51, 228, 339.
Dynes, J. N., 194.
Dzierzon, Dr., 11, 99, 234, 417. Drane, Dr. E., 153, 268, 437,

Easton, Mr. 43.
Eby, J. H. 431, 473, 478.
Eckmun J. W., 440.
Edson, A. S., 594.
Edwards, A. L., 426.
Edwards, W. R., 146.
Ebbert, J. W., 234, 597.
Exgleston, J. F., 82.
Eisenhardt, F., 34.
Eitemiller, J. 297, 410.
Elkin, B. F., 282.
Ellis, J. F., 150.
Emerick, Lee, 25.
Emerick, W., 53.
Emigh, Martin, 430.
Emmons, Jacob, 431.
Enas, J. D., 367, 391, 405, 437,
471.

471. Erwin, J., 507. Eschard, C. F., 377. Eshleman, J. B., 410. Evans, J. C., 144. Everett, B. O., 122. Everton, H. H., 144, 254, 296.

Everton, H. H., 144, 254, 256.

Fairbanks, M. H., 571.
Fay, M. M., 140.
Filbert, Levi, 423, 563.
Findley, A. R., 87.
Florini, Signor G., 217, 273.
Fish, S., 517, 523.
Fishel, Mr., 280.
Fisher, Joseph H., 440.
Fisher, Joseph H., 440.
Fisher, Joseph H., 440.
Fisher, Joseph H., 475.
Fletcher, C., 413, 475.
Fletcher, C., 413, 475.
Fletcher, W. H., 597.
Flick, H. H., 314.
Flint, Frank, 378.
Flower, W. E., 579.
Flynn, J. W., 194.
Forbes, W. E., 435.
Forncrook, J., 387, 411.
Forsyth, R., 429.
Fox, C. J., 470, 529.
Fox, John, 199.
France, E., 428, 570.
Frasier, G. W., 144.
Freidenburg, A. A., 392, 517.
French, W. L., 197, 415, 428. 2 99. French, W. L., 197, 415, 428. Frost, F. C., 508. Fuller, D. A., 144. Fultz, W. S. 23. Funk, H. W., 152, 415, 436, 461.

461.

Garlick, G., 247, 487.
Garvin, J. L., 597.
Garvin, J. L., 597.
Gastman, E. A., 342.
Gatter, Hern. Karl, 11, 75, 99, 119, 120, 231.
Gaylord, Charles M., 503.
Gibbon, Mr., 411.
Gibbon, Mr., 411.
Gibbon, Mr., 411.
Gibbon, Mr., 414.
Gillitand, J. C., 349.
Gilven, D. S., 177, 440, 478.
Glasgow, F. M., 53.
Glazder, E. B., 296, 571.
Goodno, J. E., 528.
Gordon, Capt., 218.
Goodno, O. R., 388.
Gordon, Capt., 218.
Gould, E. J., 245, 249.
Gravenhorst, C. J. H., 153, 322, 489.
Gravenhorst, C. J. H., 153, Green, G., 428.
Green, G., 428.
Green, G., 428.
Green, J. A., 438.
Green, J. A., 438.
Green, Greenshade, L. B., 509.
Greer, I. N., 507.
Greenshade, L. B., 509.
Greiner Bros., 72, 273, 413.
Griffes, A., 341, 578.

INDEX TO CORRESPONDENTS.

A. A. B., 27, 83.
Abbet, E. P., 529.
Abbott, C. N., 167.
Adams, Willis, 597.
Alderman & Roberts, 98.
Alexander, C., 439.
Alexander, Mr., 146.
Allen, Dr. N. P., 40, 50, 97, 197, 284, 329, 429, 500, 507, 514, 516, 551.
Allen, Joseph, 40.
Allen, Ransom, 245, 430.
Allen, W. C. B., 191.
Alley, Henry, 96, 170, 175, 197, 214, 220, 237, 446.
Alsike, 325.
Anderson, J., 429, 503.
Anderson, J., 429, 503.
Anderson, J. 12, 88, 436.
Andrews, W. J., 10.
Antrim, L., 577.
Arro, R. M., 22, 42, 79, 240, 318, 551.
Armitage, W. H., 368.
Armstrong, B., 438.
Arnold, D. J., 194.
Ashverth, Rev. W. J., 153, 201, 215, 277, 577.
Austin, James A., 217, 339, 426, 529.
Averill, B. F., 578.
Aydelotte, J. W., 508.
Allow, M. L., 80, 436.

Aylor, R. L., 80, 436.

Bacon, R., 432, 499, 532.
Bagby, E. A., 282.
Balley, M., 426.
Balley, M., 426.
Balley, M., 426.
Balley, M., 426.
Baker, E. R., 486.
Baker, L. B., 215, 277, 577.
Baldridge, M. M., 135, 167, 332, 355, 366.
Baldwin, P., 24.
Ballentine, Rev. W., 392.
Balles, M., 411.
Ballou, Addle L., 487.
Banner, R. 1, 551.
Barnum, B. B., 443, 507.
Bartrum, R. B., 483, 507.
Bartrum, R. B., 483, 507.
Bartrum, R. B., 483, 507.
Bartrum, R. J., 296.
Bassett, J. P., 440.
Battles, I. S., 337.
Beanl, Drof. W. J., 344, 501, 502.
Bean, J. W., 284, 507.
Bean, M. C., 296, 571.
Benedict & Newman, 220, 477.
Bennett, R. J., 28, 348.
Benton, Frank, 10, 52, 213.
Benton, Miss D., 569.
Bertrund, Mons Ed., 11, 15, 74, 101, 363, 512.
Betsinger, N. N., 145.
Beyer, J., 215.
Betsinger, N. N., 145.
Beyer, J., 215.
Biller, J. G., 44, 473.
Billing, P., 440.
Billing, P., 447.
Billing, P., 440.
Billing, P., 447.
Billing, P., 448.
Billing, P., 449.
Billing, P., 440.
Billing,

Bittenbender, S., 291.
Bitser, Wm., 439.
Blackburn, H., 457.
Blackburn, Mr. 279.
Blanchard, M., 477.
Blanchard, O. C., 434, 472.
Blanton, Dr. O. M., 406, 426,

Bunchard, M., 477.
Blanchard, O. C., 434, 472.
Blanchard, O. C., 434, 472.
Blanton, Dr. O. M., 406, 426, 457.
Bledsoe, O. F., 97.
Bledsoe, O. F., 97.
Boardman, H. R., 516.
Boerstler, J., 51, 415, 431.
Bogart, E. F., 59, 339.
Bolling, W., 343, 581.
Bognart, E. F., 59, 339.
Bolling, W., 343, 581.
Bonham, L., 377.
Boombower, F., 435.
Bourgmeyer, John, 51.
Bourne, Mr., 411.
Boutelle, D. K., 569.
Bowditch, F. C., 474.
Bowen, Erastus, 162.
Bryd, C., 392.
Bryd, C., 392.
Bryd, C., 392.
Bradish, C. W., 478.
Bray & Sencord, 266.
Breed, J. E., 39, 151.
Bristol, S. S., 428.
Brooks, J. M., 36, 181, 214.
Brown, G. J., 502.
Brown, Dr. J. P. H., 359, 515, 521.
Brown, Dr. J. P. H., 359, 515, 522.
Brown, Dr. L. E., 507.
Bryant, B. F., 468.
Burch, H. A., 194, 221.
Burdick, J., 434.
Burgett, W. B., 49.
Burnett, H. G., 197, 528.
Burnett, W. W., 314, 331, 418, 427.
Burrell, H. D., 463.
Burt, C. S. 94, 991.

Collins, Samuel, 507.
Collins, W. T., 13.
Colt, B. F., 598.
Conk Bi, F., 598.
Conk Bi, F., 598.
Coley, O. E., 239, 435.
Cook, P. Cook, P.

Curtis, O. B., 473.

Padant, Ch., 127, 141.
Dadant, C. P., 288, 381, 488.
Dart, R., 33, 425.
Dart, R., 33, 425.
Dart, R., 33, 425.
Dart, R., 33, 425.
Dart, R., 347.
Davis, A. J., 502.
Davis, A. J., 502.
Davis, J. D., 40.
Davis, J. D., 40.
Davis, J. D., 40.
Davis, J. J., 408.
Davis, J. J., 408.
Davis, J. J., 408.
Davis, W. J., 200, 529.
Dean, C. H., 525.
Decrow, J. B., 412.
Delair, E., 363.
Delair, E., 363.
Delair, E., 363.
Delair, W. B., 38.
Delair, W. B., 38.
Delair, W. B., 38.
Delair, W. B., 38.
Demarce, G. W., 382, 520.
Dennier, Mons., 11, 15, 217.
Detwiler, W. B., 38.
Detter, A. A., Jr., 477.
Dibbern, C. H., 433.
Diehi, L. J., 312.
Dilliey, A. D., 415, 581.
Dilliman, S., 38.
Dipman, John F., 477.
Dirwanger, J. A., 50.
D. J. W., 427.
Dodger, G. W., 267.
Dodge, J. E., 183, 512, 521.
Dodge, S. C., 183, 512, 521.
Dodge, S. G., 183, 512, 521.
Dodge, J. G., 367, 420, 432, 462, 481, 505, 565.
Donley, J. W., 432.
Dougherty, F. L., 103, 275, 577.
Drane, Dr. E., 153, 268, 437, 507. Drane, Dr. E., 153, 268, 437, 507.
Drory, Edward, 11.
DuBois, L'Abbe L., 15, 340.
DuBois, M. D., 476.
Duncan, Dr., 510.
Duncan, J., Jr., 149.
Dunbam, Mrs. F. A., 216, 220, 224, 241, 463.
Dunken, P., 96, 388.
Dunn, Thomas, 291.
Durbam, T. H., 50.
Dyer, Wm., 51, 228, 339.
Dynes, J. N., 194.
Dzierzon, Dr., 11, 99, 234, 417. Drane, Dr. E., 153, 268, 437,

Easton, Mr. 43.
Eby, J. H. 431, 473, 478.
Eckmun J. W., 440.
Edson, A. S., 594.
Edwards, A. L., 426.
Edwards, W. R., 146.
Ebbert, J. W., 234, 597.
Exgleston, J. F., 82.
Eisenhardt, F., 34.
Eitemiller, J. 297, 410.
Elkin, B. F., 282.
Ellis, J. F., 150.
Emerick, Lee, 25.
Emerick, W., 53.
Emigh, Martin, 430.
Emmons, Jacob, 431.
Enas, J. D., 367, 391, 405, 437,
471.

471. Erwin, J., 507. Eschard, C. F., 377. Eshleman, J. B., 410. Evans, J. C., 144. Everett, B. O., 122. Everton, H. H., 144, 254, 296.

Everton, H. H., 144, 254, 256.

Fairbanks, M. H., 571.
Fay, M. M., 140.
Filbert, Levi, 423, 563.
Findley, A. R., 87.
Florini, Signor G., 217, 273.
Fish, S., 517, 523.
Fishel, Mr., 280.
Fisher, Joseph H., 440.
Fisher, Joseph H., 440.
Fisher, Joseph H., 440.
Fisher, Joseph H., 475.
Fletcher, C., 413, 475.
Fletcher, C., 413, 475.
Fletcher, W. H., 597.
Flick, H. H., 314.
Flint, Frank, 378.
Flower, W. E., 579.
Flynn, J. W., 194.
Forbes, W. E., 435.
Forncrook, J., 387, 411.
Forsyth, R., 429.
Fox, C. J., 470, 529.
Fox, John, 199.
France, E., 428, 570.
Frasier, G. W., 144.
Freidenburg, A. A., 392, 517.
French, W. L., 197, 415, 428. 2 99. French, W. L., 197, 415, 428. Frost, F. C., 508. Fuller, D. A., 144. Fultz, W. S. 23. Funk, H. W., 152, 415, 436, 461.

461.

Garlick, G., 247, 487.
Garvin, J. L., 597.
Garvin, J. L., 597.
Gastman, E. A., 342.
Gatter, Hern. Karl, 11, 75, 99, 119, 120, 231.
Gaylord, Charles M., 503.
Gibbon, Mr., 411.
Gibbon, Mr., 411.
Gibbon, Mr., 411.
Gibbon, Mr., 414.
Gillitand, J. C., 349.
Gilven, D. S., 177, 440, 478.
Glasgow, F. M., 53.
Glazder, E. B., 296, 571.
Goodno, J. E., 528.
Gordon, Capt., 218.
Goodno, O. R., 388.
Gordon, Capt., 218.
Gould, E. J., 245, 249.
Gravenhorst, C. J. H., 153, 322, 489.
Gravenhorst, C. J. H., 153, Green, G., 428.
Green, G., 428.
Green, G., 428.
Green, J. A., 438.
Green, J. A., 438.
Green, Greenshade, L. B., 509.
Greer, I. N., 507.
Greenshade, L. B., 509.
Greiner Bros., 72, 273, 413.
Griffes, A., 341, 578.

Griffith, J. C., 503. Griffith, P. T., 413, 427. Grimm, C., 523. Grogan, P. S., 434. Grohmann, F. J., 487. Grout, W. H. S., 489. Grove, F. A., 386, 471. Guenther, Hern., 336.

Guenther, Hern., 338.
Guenther, J. H., 411.

Haas, Martin., 320, 435.
Hackman, H. S., 22, 435.
Haile, S. G., 388, 369.
Haines, D. S., 215.
Haibleib, O., 431.
Hale, A. W., 97.
Hale, E. W., 529.
Hall, I. B., 507.
Hall, J. B., 426, 509.
Hallet, T., 97.
Hamet, H., 32.
Hanchet, Mr., 44.
Hancock, C. H., 248.
Hanneman, F. A., 178.
Hardin, E. E., 436.
Hardin, E. E., 436.
Hardin, H. S., 248, 339.
Harmon, C. E., 188.
Harrington, Mr., 517.
Harrison, Mrs., 188.
Harrington, Mrs., 188.
Harrison, Mrs., 244, 254, 268.
Hattleid, A. J., 245, 461.
Hausmann, Wm., 474.
Havens, R., 247, 355, 457.
Hausings, J. E., 244.
Harshey, J., 187.
Headon, James, 34, 41, 92.
185, 152, 165, 173, 220, 221, 222, 270, 319, 383, 424, 427, 459, 461, 537, 557.
Heister, Levi, 412.
Hersbey, J., 188.
Hersbey, E., 274, 410.
Hersperger, H. C., 282, 507.
Hetherington, O. J., 44.

410. Hersperger, H. C., 282, 507. Hetherington, O. J., 44. Hibbard, J. M., Jr., 50. Hicks, J. M., 103, 282. Higbee, David, 472. Hilbert, Hern. E., 11, 168. Hill, A. G., 103, 220, 280, 502, 519. Hillert, Herri. E., 11, 168, 1411, A. G., 103, 220, 280, 502, 512, 512, 111, J. D., 285, Hill, J. D., 285, Hill, J. D., 285, Hill, J. S., 457, 499, 569. Hiller, F., 59, Holtz, A. J., 238. Hipolite, Dr. W. W., 124, 495, 476, 513, Hodgson, Mr., 411, Hoffman, Julius, 241, Hoge, W. M., 120, 380, 419, 440, 551, 555, Hohenshell, W. T., 52, 439, Hoke, A., 247, 426, Hollenbeck, G. W., 103, Hollingsworth, Mrs. Z., 295, Holley, A., 124, H. M. S., 472, Holmes, E. J., 475, Holmes, E. J., 475, Holmes, E. J., 475, Holmes, W. N., 428, Hott, James H., 439, Honsberger, A. A., 337, Hoover, John, 576, Hopper, C., 176, 295, Hortron, W. A., 21, 436, 580, Hortron, W. A., 21, 436, 580, House, George W., 146, 217, 437, 560, 572, House, George W., 146, 217, 437, 560, 573, House, T., 12, 129, Hunter, John, 344, Hunter, T. H., 59, Hutchinson, J. D., 9, 31, 149, 248, 483.

Hyde, Richard, 214. Hyde, S. P., 406.

Ide, Jacob, 529. Ide, J. B., 178. Ingals, C. S., 94. Isham, C. R., 50, 220.

Jackson, J. P., 196. Jeffrey, H. L., 324, 342, 482, 515, 581. J. M. S., 188. Johnson, Mr., 411. Johnson, Mr., 411. Johnson, Rev. L., 269, 415, 435, 501, 517. Johnson, R. S., 476. Johnson, R. S., 476. Johnson, A. S., 476. Johnson, A. J., 476. Johnson, A., 192, 248, 489. Jones, C. A., 94, 248, 489. Jones, D. A., 10, 168, 224, 231, 222, 231, 312, 358, 497, 458, 500, 502, 509, 517, 530, 566. Jordan, B. C., 357. Julian, N., 41.

Karnatz, F. W., 123. Kuufman, C. P., 429. Kedzie, Prof. R. C., 408. Keene, Dr. R. W., 414. Keister, Levi, 104. Keller, C., 113. 149. Kelley, W. M., 9, 195, 259, 380, 456, 482, 576. Kennedy, J. H., 295. Kennedy, J. H., 295. Kennedy, J. M., 529. Kheil, Prof., 100. Kilburn, J., 438. King, A. J., 19, 171, 221, 526. King, R. V., 345. Kings, R. V., 345. Kings, R. V., 345. Kings, R. V., 345.

429.
Kissinger, D. F., 370.
Kilch, Simon, 469.
Kilne, P. J., 341.
Knapp, B. H., 571.
Knoll, D. K., 151.
Kohnke, A., 460.
Kræmer, J. C., 469.
Kramer, King, 540.
Kropp, J. F., 459.
Kruschke, H. O., 366.

Laibly, C., 198.
Langton, H. L., 168.
Langstroth, Rev. L. L., 167.
Lanker, G., 598.
Lansing, A. L., 191, 571.
Lantz, L. Z., 370, 473.
Larch, Dr. R. C. L., 149, 299.
Lee, H. W., 104, 296, 412.
Lee, John R., 217.
Leonard, S. R., 478.
Levering, N., 168, 337.
Lewis & Parks, 154, 357.
Lincoln, L. C., 46.
Lindsley, L., Jr., 440, 507.
Lacke, S. M., 327, 337, 499, 530. 530. Loehr, M. E., 266. Loehr, M. E., 266. Long, George W., 478. Longsdon, W. J., 248, 429. Loomis, A. B., 139. Lord, J. S., 340, 476. Lossing, Wm., 139, 385, 470. Love, Dr. J. F., 437. Love, Joseph, 392. Lowe, J., 554. Lucas, E., 144. Lumbeck, E. B., 51. Lynch, W. W., 437.

McCall, J. H., 269, McCarthy, G. A., 221, McCarthy, Osman, 548, McCarthy, Osman, 548, McCoy, J. N., 35, 222, 340, 411, 438, McCoy, J. F., 431, 471, McDonaid, A. V., 552, McFatridge, P. W. & Son, 50, 517, McGaw, T. G., 288, 369.

McGeorge, H. D., 218. McKay, A. J., 549. McKay, Perry, 437. McKenrich, A. F., 342. McKinney, S. J., 283, 291. McKinght, H., 549. McLean, S. D., 397. McNeil, Rev. J. W., 327. McRay, C. E., 53.

Maatman, J. H., 168,
Macartney, W, 51,
Malpin, Rev. M., 52, 103, 144,
217, 465,
Mallone, A., 409,
Mallone, A., 409,
Manchester, James, 468,
Mardin, A. E., 214, 253,
Marsher, E., 468,
Marculis, T. N., 337,
Marsher, Prof., 251,
Marsher, Prof., 251,
Marsher, Prof., 251,
Martin, L., 43, 97, 379, 581,
Marvin, J. M., 120,
Mary Brothers, 21,
Mason, Dr. A. B., 37, 344, 429,
Mason, H. D., 571,
Mason, M. E., 281, 477,
Masters, J. H., 194,
Manchell, Willer, M., 198,
Marwin, J. A., 506,
Maxield, Mr., 19,
Maxwell, Will, 324, 389,
Meadows, L. C., 292,
Mellen, R. H., 295, 571,
Mellinger, J. H., 297, 410,
Merlinn, John, 508,
Miller, C. B., 440,
Miller, Dr. C. C., 24, 78, 461,
Milliken, F. A., 368,
Milliken, R. M., 194,
Milliken, F. A., 368,
Milliken, F. A., 368,
Milliken, R. M., 194,
Milliken, F. A., 368,
Milliken, R. M., 194,
Milliken, F. A., 368,
Milliken, R. M., 194,
Milliken, R. M., 194,
Milliken, F. A., 368,
Milliken, R. M., 194,
Milliken, F. A., 368,
Milliken, R. M., 194,
Milliken, R.

Naftzger, G. W., 461.

Naftzger, G. W., 461.

Needlea, J., 518.

Neihardt, G. W., 103, 186.

Neihardt, G. W., 103, 186.

Neihardt, G. W., 103, 186.

Neison, J. A., 248, 253, 431.

Neison, P. P., 247, 456.

Newlove, J. W., 41.

Newman, A. H., 313.

Newman, A. H., 313.

Newman, M. A., 464.

Newman, S. F., 522.

Newman, T. G., 44, 99, 101.

105, 170, 281, 296, 461, 500, 507.

510, 518, 528, 532.

Newsom, C. S., 96, 150, 338, 438.

Newson, W. H., 437.

Newton, J., 349.

Newton, J., 349.

Newton, J., 349.

Newton, J., 340.

Newton, J., 364.

Norton, B. H., 440.

Catman, E. J., 45, 466. Oldham, S. M., 41. Oldt, R. B., 440. Olm, C. 123. O'Rear, Dr. J. H., 149. Ormsby, L. D., 427. Osborn, R. M., 370.

Paglia, Signor L, 11. Palleys, Mr., 469. Palmer, D. D., 187, 295, 360, Agains, Sinfor I., II.
Palleys, Mr., 469.
Pallmer, D. D., 187, 296, 380, 574.
Panimel, L. H., Jr., 96, 220, 223, 317, 337, 337, 387, 380, 412, 434, 468, 517, 570, 573.
Parker, Thomas, 471.
Parker, D. G., 508.
Parker, T. B., 529.
Parish, E. A., 433.
Parmly, Dr. E., 171, 272, 510, 569.
Parshall, J. M., 52.
Payne, C. L., 281.
Peabody, J. L., 559.
Peacher, H., 104, 430.
Peck, D. J., 436.
Peel, Rev. H. R., 196, 510.
Peet, T. O., 123, 541, 551.
Pelham, J. E., 31.
Pelham, W. C., 344.
Peitz, J., 469.
Perry, F., 151.
Perry, Geo. L., 215, 263, 277, 389, 577.
Perry, S. P., 215.
Peters, Louis, 469.
Peters, J. C., 474, 502.
Pettigrew, A., 134.
Pettit, S. T., 518.
Pickup, E., 55, 78, 220.
Pierce, C. A., 191, 285, 571.
Pierce, G. H., 345, 411.
Pigman, W. G., 194.
Piece, D. A., 191, 285, 571.
Pierce, G. H., 345, 411.
Pigman, W. G., 194.
Piece, D. A., 191, 285, 571.
Pierce, G. H., 345, 411.
Pigman, J. E., 435.
Plant, Signor Pietro, 11.
Pitman, J. E., 435.
Poppleton, O., 477, 504, 581.
Poppleton, O., 477, 504, 581.
Portt, J. W., 529.
Pratt, H. F., 96, 238, 478. 581. Porter, J. W., 529. Prutt, B. F., 94, 338, 478. Precious, J., 486. Prentiss, Mr., 44. Price, J. W., 246, 431. Price, B. B., 517. Putnam, H. F., 290. Purvis, L. G., 578.

Quinlan, T. B., 431. Quinn, J. J., 269.

Ranney, W. C., 426. Rapp, J. B., 248. Ray, J. F., 40. Reed, F., 40. Reed, O., 288. Reibstein, Hern., 100. Reynolds, M. G., 388. Rhodes, J., 508. Ribeaucourt, Mons. C., 15, 101.

Ribeancourt, Mons. C., 15, 101.

Ribeancourt, Mons. C., 15, 101.

Rice, A., 144, 263, 286, 305, 461.

Richardson, M., 434.

Rider, D., 84, 288.

Riegel, P. A., 473.

Riser, J. W., 199.

Robbins, Mrs. Cass, 104.

Robbins, Mrs. Cass, 104.

Robertson, J. H., 12, 45.

Rogers, J. P., 368.

Rooker, John, 81.

Roop, H. M., 163, 391.

Roop, H. M., 163, 391.

Roop, H. M., 169, 515.

Root, J. L., 76, 145, 185, 417.

Rose, J. W., 284.

Rosebaum, H. J., 289, 429.

Rosebaum, H. J., 289, 429.

Rosebaum, H. M., 178.

Ruck, Mr., 103.

Ruchler, S. H., 478.

Ruck, Mr., 103.

Ryan, J. M., 427.

Sage, F. I., 390. Saliceto, A., Visconti, 97, 310.
Salisbury, Rev. A., 42, 182, 264, 422, 435, 462.
Salisbury, B., 13, 145, 460.
Salisbury, F. A., 448.
Sanders, Mrs. A. M., 417.
Sanders, J. W., 338.
Sappenfield, C. W., 238. Sartori, Signor L., 99, 142.
Saunders, Joseph, 477.
Saurin, F. J. 440.
Sawdey, A. M., 438.
Sawyer, O. L., 247.
Sauxon, C. W., 199.
Saxton, C. W., 199.
Sayles, H. P., 191.
Scenree, F. P., 224.
Scheerer, J., 438.
Schott, H. 638.
Schott, J. C., 235.
Schott, J. C., 247.
Schott, J. C., 249.
Schott, J. C., 259.

Stewart, J., 104, 219, 412, 431, 577. 577.
Stewart, W. T., 483.
Stich, F. J., 341.
Stimson, M. M., 345.
Stocking, A. D., 51.
Stone, C. A., 439.
Stray, George, 44.
Subscriber, 98, 475.

Tadlock, J. S., 476. Taylor, C. W., 18. Taylor, R. C., 16, 168, 246, 262, 263. Tavior, R. C., 16, 168, 246, 282, 263, Teighor, N. J., 504. Teiler, Geo. W., 435. Terrell, O. J., 439. Teter, Rev. J. G., 85, 101. Theilmann, C., 369. Thomas, G. W., 445. Thompson, C. W., 40. Thompson, David, 340. Thompson, W. R. 269. Thompson, J. H., 507. Thurber, A. G., 148.

Sourbe, Mons. T., 221.
Southwick, E. B., 139, 220, 230.
Sowers, S. P., 342.
Sowers, S. P., 342.
Spaniding, J. H., 429.
Spaulding, J. H., 429.
Spaulding, J. H., 429.
Spaulding, M., 284.
Spear, F. N., 38.
Spaniding, M., 284.
Spearer, Mrs. D. C., 80, 131, 391.
Sprain, Mr., 469.
Spurr, Dr. R. L., 257.
S. S. H., 438.
Stabata, Counsellor, 100.
Standish, B. H., 429.
Stanley, G. W., 427.
Steele, George E., 46, 152.
Stephens, W. P., 429.
Stevens, Dr., 429.
Stevens, Dr., 429.
Stevens, Dr., 429.
Stevens, Dr., 564.
Stewart, J., 104, 219, 412, 431, Thurlow, T., 410.
Tibbetts, A. J., 267, 338.
Ticknor, F. A., 248.
Todd, J. O., 120, 255.
Toney, B. B., 440.
Towniey, J. H., 44, 459.
Townsend, O. H., 253, 273.
Tracy, Thomas, 314, 427.
Trelease, Prof. W., 137, 184, 253, 271, 362, 266, 422.
Trunkey, Mr., 281.
Tubbs, S. E., 220, 478.
Turner, Prof. J. B., 139.
Turner, T. E., 411.

Ulery, D. B., 436. Ulsh, H. W., 265.

Valentine, S., 218, 370, 529, 557, 579.
Valiquet, Thomas, 218, 529.
Van Antwerp, D. W., 35, 224, 367.
Van Deusen, J., 30, 244, 369.
Van Deusen, R., 471.
Van Eaton, Rev. J., 196.
Van Ness, J. H., 44.
Viallon, Paul L., 515.
Vincent, G. A., 508.
Vinson, W. M., 589.
Vogel, Hern, 11, 335.
Von Dorn, T. L., 194, 501. Walentine, S., 218, 370, 529,

Wainwright, L. M., 103, Wakeman, W. H., 329, Waldo, C. E., 485, 577, Walker, Francis A., 73, Wallace, J. G. A., 510, Waiton, Col. R., 429, Walton, W. G., 13, 561, Ward, H. J., 449, Ward, W. S., 151, 337, 339, Waters, Mr., 147, Watson, Jesse B., 366, Wuy, D. S., 51, Wentherbee, W. B., 168, Webster, D. G., 197, Webster, F., 510,

Weed, A. B., 126, 191. Welling, Charles, 436. Wells, W. C., 437. Weeks, E., 45. Wenzel, A. E., 48, 143, 166, 220, 265. Wenke, E., 45.
Wenkel, A. E., 48, 143, 166, 220, 255.
Whaley, R. G., 439.
Whipple, Mr., 469.
White, H., 563.
White, H., 563.
White, P. A. A. E., 478.
Wilcox, F., 477, 584.
Wilcox, F., 477, 584.
Willams, M. J., 150, 220, 264, 429, 484.
Williams, Dr. H. M., 247, 504.
Williams, Capt. W. F., 520.
Williamson, J. R., 284.
Williamson, J. R., 284.
Williamson, J. W., 520.
Williamson, J. W., 520.
Williamson, J. T., 284.
Williamson, J. W., 284, 455, 500, 507, 515.
Wilson, Dr. I. P., 151.
Wilson, J. W., 337.
Wilson, J. W., 337.
Wilson, J. W., 337.
Wilson, J. W., 337.
Wilson, R. D., 477.
Winslow, A. A., 411.
Winner, J. M., 367.
Wolcott, Win, C., 434.
Wolfe, L. B., 332.
Wolfender, J. L., 432.
Wolfender, J. L., 432.
Wolfender, J. L., 432.
Wolfender, J. L., 432.
Wolfender, J. S., 35.
Wood, J. S., 35.
Wood, J. S., 35.
Wood, J. S., 35.
Wortser, C., 128, 568.
Wyckoff, W. D., 337, 333, 580.
Wyckoff, W. L., 480.

Young, C. L., 429. Young, W. R., 152.

Zalser, John A., 468. Zimmerman, G.W., 268, 476, Zimmerman, T. G., 434. Zoules, Mr., 469.

INDEX TO ILLUSTRATIONS.

	2
	19
	11
	7
	11
	8
	3
Dunham Comb Foundation Mill	1
English Bee Tent	14
	17
	7
	21
Hastings' Queen Mailing Cage	2h
M. S. Snow's Swarm-Catcher	25
Nailing Machine for Frames	66
	33
Rack for Comb Honey	3
Rocky Mountain Bee Plant	-

Sprinkler for washing out Drone Brood, etc	37
Sweet or Melilot Clover-Melilotus Alba	362
The Bee Moth	90
The late Mr. John Hunter	364
Tool for Glassing Sections	566
Walton's Frame of Comb Foundation	561
Where Honey Comes From:	
Pistil and Calyx of Geranium	137
Cross Section of the Upper Pedicel	138
Cross-Section of the Lower Pedicel	138
Epidermal Cells, magnified	138
Form of the Secreting Cells	138
Flower of the Hyacinth	232
Vertical Section, magnified	252
Cross-Section, magnified	20,00
Peduncle of Flowers	201
Cross-Section, showing a Knob	272
White's Pulsee Ree Hive	112

INDEX TO SUBJECTS.

Abnormal Swarming-	Bee-Keeping-	Bee Pasturage-continued.
cause of	adaptability necessary34. 282, 285	do bees get honey from red clover?275, 291, 292, 369, 412, 413, 464, 489, 509, 516 517
Adulterations-	American and European con-	herds of cattle improve white
a law against, demanded85, 86, 122, 213, 309, 333, 362 528 condemned	trasted	herds of cattle improve white clover for honey
86, 122, 213, 309, 333, 362 528	cause of failures in . 34, 79, 186, 282	227, 264, 324, 410, 482 574
law against, in Canada 528	census figures of	melilots as weeds
of food in general85, 333, 454	growth of the industry 526	of Denmark 35
law against, in Canada 528 of food in general 55, 333, 454 of honey 55, 169, 235, 286, 333, 527 of sweets 285 test of 85	intelligent management essen-	Kentucky 515
test of 85	in Abyssinia	221, 201, 203, 310, 303 349 100 10
Aplary-	Arkansas	
ants in29, 314, 331, 367, 379, 418 apicultural failures536	Canada 218	Bees-
apicultural failures 536 chat with Adam Grimm about 135	census figures of .73, 275 does it pay .34, 537 growth of the industry .34, 537 intelligent management essential .34, 79, 196, 285, 526 in Abyssinia .433 Arkansas .433 California .218, 261, 391, 302 Canada .218, 261, 391, 302 Cincinnati, 0 .457 Denmark .35 England .196, 461, 556 Flortda .29, 84, 91, 88 India .29, 84, 91, 88 India .21, 24 Indiana .21, 25	albinos120, 218, 370, 504, 557
do bees injure fruit? 165	Denmark85	American bees in Italy. 11, 44, 123
hints on supply dealing270.	England196, 461, 555	ancient importance of 315
keep a register in140, 562	India 124	ancient importance of
nints on supply dealing270, 327, 342 422 keep a register in 140, 562 location for 130, 190, 363, 516, 562 losses by fire in an 19, 1:2 management of 327, 569, 561 Mr. Dougherty's 70	Indiana	Apis Dorsata of Java272, 489
management of327, 509, 561	Kansas	are bees a nuisance
Mr. Dougherty's	Mississippi 97 Missouri 23, 325 Northern Michigan 46	as trespassers
A montour uniouthuma 200	Russia 140	breeding the best. 44, 521 brush for. 188 careful handling of 451 Carniolan 241 Caucasian, discussed 335 close breeding not detrimen-
Mr. Hill's, a visit to 569	Scotland26, 248, 554	careful handling of 451
over-stocking180, 193, 292.	Russia 140 Scotland 25, 248, 554 Southern Brazil 127, 467 Spain 127, 467	Carnonan
Mr. Hill's, a visit to 523 Mr. E. C. Jordan's 357 over-stocking 180, 193, 292, 461, 518, 557, 559 576 practical and timely work. 224, 562 protection of an	Tennessee 199	close breeding not detrimen-
	Texas	tal44, 82 colony, organization of338
system, a secret of success, 327, 562	Vermont 386	crosses of
the South as a location for 363 weevil, cure for 14, 377, 414, 475	influence of the press upon 550 ladies successful at21, 285, 528	crusade against, in France 408 desirable points in 296
Bee Enemies-	"luck" a fallacy in 31	
a list of 380	other business suited to 576	A - Ab I - I 6 I + 3 909
Asilus flies	other business silted to	driving of
Asilus Missouriensis	practical hints on139, 285, 526	eggs that would not hatch 474
110ks (6)	profits of40, 47, 71	duty on
king birds	prospects of	133, 166
mice and rats94, 248	system and order in 561	
spiders	theory versus practice 148	fanciful experiments with 28
king Dirds 383 leaf-eating beetles 344 mice and rats 94, 248 spiders 247, 399 stinging bugs 473, 500 swallows 35 venus fly-traps 265	Bee Literature-	food for young
venus ny-traps 262	Adulterations of Food 30	hybrids, not uniform 500 improved ruces of 518, 521, 524
Bee Feeders-	American Entomologist 73 Bee-Keepers' Guide 505	improved races of518, 521, 524 in-and-in breeding
Cheney's 71	Bienen-Zeitung 16	industry, a quanty in
Cheney's 77 C. Hopper's. 28 Dr. Parmly's 77 Hershey's 41 Huntley's 71 King's 77 Rice's 144 Shuck's 144, 35 syrup for 7	Blessed Bees	innumerable journeys of 19 interesting details concerning 48
Hershey's 410	Cook's Manual16, 51, 152, 167, 200 Cotton's Ree Books	large colonies necessary83, 56
King's	Dominion Pet Stock Bazaar 45	late breeding of
Rice's 14	Newman's Ree-Cuiture 26	length of tongue
STUD for	"Our Apiary"217, 45	marking their location
	Cook's Manuallb, 51. 152, 154, 256 Cotton's Bee Books	moving hives a short distance,
Bee Journal	the power of the press 550	40, 136
appreciated 49, 51, 81, 94, 95, 96, 97, 151, 166, 174, 199, 220, 266, 289, 29, 315, 337, 339, 370, 413, 502, 533, 550, 579	Bee Stings-	plenty of bees and honey 56
266, 268, 249, 315, 337, 339, 370,		pollen for
413, 502, 533, 550, 579		plenty of bees and honey
clubbing rates	for tooth-ache	
222, 229, 240, 268, 269, 271, 328, 377 editorial reviews	healing power of	shipping on cars
European notices of 74, 123,	in the human system 34	
149, 340 512 editor's European tour, 14, 97.	Bee Pasturage	
editor's European tour14, 97, 360		transferring. 40, 82, 150, 205, 276, 41 284, 293
New Year's greeting	apple—second bloom 45 bees as fertilizers of plants	water for198, 27
the editor's European honors	earrying bees to pasture290, 48	
15, 97, 123, 310		
15, 97, 123, 310	wood and white clover 46	adulteration of
the editor's European honors, 15, 97, 123, 310. the volume for 1880550, 551, 55 the weekly desired550, 552, 553, 579 worth hundreds of dollars 16	wood and white clover . 46 concert by bees	2 adulteration of

Comb Foundation-	Conventions-continued,	Feeding Bees-
	N. W. Illinois and S. W. Wis-	apple vinegar, soft water and
advantages of39, 50, 78, 104, 148, 213, 242, 247, 277, 281, 314, 415, 420, 462, 525, 561	consin	sugar for 370
compared242, 310, 356, 368, 462, 525	N. W. Missouri and Eastern Kansas	sugar for
drone or worker cells for sur- plus? 290 Dunham80, 242, 314, 356, 423, 524, 525		o41. how to prepare food for 81. in early spring 38, 267, 295, 324. is cider detrimental 7 467. rye meal 40, 85. sugar syrup for 193, 217, 280, 283, 325. when and how to feed 36, 81, 128, 144, 151, 277, 283, 325, 381, 391. with nedlen 129.
524, 525 561	Southern Michigan	is cider detrimental ? 467
experiments with	Tuscarawas & Muskingum, O. 392	rye meal
overnoting the wives 109	Western Illinois & Eastern Iowa9, 195, 289, 456, 574	283, 325 370
Faris' plates 420 Given's wired 177, 356, 383 help in manufacturing 365, 481 in comb honey 18, 243, 524, 534	Cyprian and Syrian Bees-	128, 144, 151, 277, 283, 325, 381, 391
help in manufacturing365, 414		with pollen 129
ln comb honey148, 243, 524, 534 lengthening the cell walls 368	bee-keeping in Cyprus 567 compared with Italians229,	Frames
made on wood	241, 367	all of one size
526	416, 538	enameled cloth over 341
not artificial 406 Olm's mill for 123, 341, 345 sagzing of 314, 367, 470, 471, 561 thin for surplus 50, 242, 525 wash used in making 53, 545	estine	extracting from brood frames, 98 how far apart, in winter 98 how many for surplus honey?. 293
thin for surplus50, 242, 525	Messrs. Jones and Benton's	how many for surplus honey?. 293 improvement in
when to buy a machine 385	trip to Asia for52, 168, 213, 272, 311, 458	improvement in
wired39, 414, 468, 470, 525 without corrugations	Mons. J. Fiorini's journey to Cyprus to obtain217, 373	reversible frame 405
	Prof. Cook asked to report on, 419 prolificness of 405	standard size desired 530 the coming frame 539
Comb Honey-	queens, duplication of	
assort and label	superior races231, 311, 520 Yellow races520	adulteration of honey, with
532	Deaths of Aplarists-	18, 333
Dr. Blanton's shipment of 406 fair prices for 280, 552 feeding back extracted honey. for 77, 235, 329, 390, 493, 596, 531 how to obtain 34 231, 389, 532	Rev. Wm. C. Cotton	98, 261, 280, 285
feeding back extracted honey,	Rev. Rufus Morgan	experiments with
	Mr. W. L. Gordon	made from rags 263
keeping	Rev. A. H. Hart 487	manufacture of 18, 98, 332 527 selling as honey, a fraud, 18, 77, 527
321, 532	Diseases of Bees-	made from rags. 203 manufacture of. 18, 98, 332. 527 selling as honey, a fraud, 18, 77, 527 that will kill. 72, 261, 472 unprofitable for adulterating
racks, use of in winter	breeding in cellars, a cause of, 81 causes of	comb honey 77
strong colonies and prolific	chilled brood 52	Hives-
queens necessary, to get. 36	dead brood in cells	best for surplus honey-8 or 10
Combs-	diseased combs. 124 dysentery. 21, 33, 274 cause of. 5, 21, 194 foul brood. 122, 124, 167, 287, 286, 339, 344, 453, 499, 475, 479, 521, 534 experiments with. 455, 479, 534 Hern E. Hilbert's discoveries, 168 remedies for . 344, 459, 479, 535	frames? 293 capacity of brood chamber 36, 286, 296, 371 411 chaff hives 267
amount of honey consumed to	foul brood122, 124, 167, 267, 280,	36, 286, 296, 371
produce	experiments with 459, 479, 534	chaff hives
bleaching old	remedies for344, 459, 479, 535 fungous growth of brood 124	convenience and simplicity of.
Cheshire's "rakes" for holding up312, 372	fungous growth of brood 124 honey-dew a cause of 132	convenience and simplicity of, 282 282 286 distance between
clamps for fastening 339 how to fasten 29, 372		division board, not patented
how to keep moth out of 97	Drones-	200,
how to keep moth out of 97 mouldy	absence of	"Golden" bee hive 340
petrified	destroyed by the workers 345 early drones	hard-wood for making 16 Harris' Gem bee hive 217
	how to prevent rearing245, 290 improved races of	Hill's Winter hee hive
Conventions—	Italianizing by 560	Langstroth bee hive, 29, 40, 96,
arrangements for	sprinkler to wash out brood 37	Kidder's bee hive 29 Langstroth bee hive 29, 40, 96, 102, 143, 199, 267, 287, 371 458 made of wood and plaster 87, 288 Mitchell's bee hire 568
reports—Albany Co., N. Y 337	the last drone of summer 70	Mitchell's bee hive
Indies and	Extracted Honey-	movable frames, history of 526
Austro-German99, 335, 363	best hive for 289	Prince Arthur bee hive 489 seeking the best
Caledonian 314	compared with comb honey, 531 533	seeking the best
	frequent extracting desirable, 289	weighing
Central Kentucky 282 Central Michigan277, 577 Chicago North-Western	hard-wood barrels for472, 570 how to produce, sell and ship534	White's "Palace" bee hive 12 wire cloth for bottoms 168
263, 365, 407, 452	more profitable than comb	wire cloth for bottoms 108
Indiana State	one day's work, extracting	Honey and Bee Shows
Marshall Co., lowa 395	small pine casks dest for 472	display of honov and anierian
Michigan State 5 577	should be capped before being extracted316, 534	supplies at
Kentucky State	sun evaporator for 533	in Scotland
357, 412	Fertile Workers-	in Scotland. 485 premiums at. 359, 407, 453, 455 prizes for, at fairs. 70, 276 State Vice Presidents' duties
North American19, 75, 359,		State Vice Presidents' duties
407, 457, 500	accompanying a swarm 371	COncerning
407, 457, 500	accompanying a swarm 371 caught in the act of laying 391 experience with 310, 369, 474	tent for bee exhibitions, at
Lat. rosse North-Western	accompanying a swarm 371 caught in the act of laying 331 experience with 310, 369, 474 how to get rid of 234, 310 specimens 406, 453	tent for bee exhibitions, at 419, 441

Honey-	Honey Producing Plants-	Honey Harvest-
American, in Europe	alfalfa	a failure366, 367, 369, 370, 391, 466 a magnificent yield266, 455, 560 estimate of the crop of 1880
basswood honey, a prejudice against	alder	406
creating a demand for294, 533 crop in California49, 69, 261, 337 crop in Europe	basswood46, 80, 135, 152, 326, 338, 361, 369, 370, 505, 515 573	reports of368, 369, 376, 412, 425 to 440, 467, 469, 476, 478, 489, 507
Doolittle's crop report 505 drinks, how made 31	bearberry 266 beggarticks 501 bergamot 574	what will the harvest be?358, 406
European markets destitute of 122 extracting at the end of the season	basil 515 bearberry 256 beggarticks 501 bergamot 574 blackberry 47, 80, 275, 515 blackhaw 225 blackheart 52 black locust 226, 515 black maprove 91 bokhara clover 517 boneset 152	Cotton
feeding back, to be stored in sections77, 255, 529, 590, 465, 506	black mangrove	a hybrid race
good prospect next season for 579 good yield of .50, 51. 52, 246, 580, 581 granulation of pure	boneset. 152 borage. 471, 517, 573 buckeye 372 buckwheat 266, 275, 516, 517, 574 cabbage palmetto 91	compared with Cyprians 229 compared with natives38, 42,
healthfulness and flavor of 486 home markets for 294 honey-dew 23, 36, 50, 132, 150, 227, 264, 524, 410, 482 574 honey producer's future 459	buckwheat 266, 275, 516, 517, 574 cabbage palmetto 91 catnip 50, 80, 516 celendine weed 489 cleome 22, 53, 80, 406, 475, 489, 594, 517 580 coralberry 516 corn 226 cotton 36, 225 crab apple 573 dandelions 573 dates 92 deerbrush 66 elm 515	145, 197, 291. 503 description of 520 improvement of the race. 11, 32, 44, 82, 125, 189, 229, 235, 241, 289, 283, 467 518 leather-colored preferred, 135, 519
for 31	coralberry	trasted 519 590
how to make it a staple pro- duct	dandelions 573 dates 92 deerbrush 66	more hardy than natives44, 149
marketing of76, 146, 293, 510 market quotations for24, 78, 512	elm	455, 518, 560. work on red clover 275, 291, 222, 369, 412, 413, 464, 489, 509, 516
mr. Jones plan of obtaining surplus	goldenrod29, 47, 80, 152, 275, 414, 472, 489, 516, 517, 574581 gooseberries275, 470, 516	Italianizing an Aplary
producers' interests in, 173, 293, 459 prospects for 197, 222, 339, 345, 393	fireweed. 46 flaxweed. 46 flaxweed. 228 fruit trees. 85, 225, 275, 324, 328 goldenrod. 29, 47, 80, 152, 275, 324, 328 414, 472, 489, 516, 517, 574 gooseberries. 275, 470, 516 ground ivy 517 hawthorn 518 hearts-ease 361, 573 honeysuckle 264 honey vine 266 horsemint 227, 366 Jamestown weed 227, 368	accomplished by drones 560 benefits of
should be ripened284, 285, 535 side or top storing, which? 289 small yield of22, 23, 35, 38, 40,	honey vine	Langstroth, Rev. L. L.— abuse of
BOULMOOD BOHEY	Jersey tree—red root	fund for 167 Marketing Honey-
style most important	locust	attractive packages 194, 281, 293, 321, 531, 552
184, 232, 271, 386	melilot clover 30, 305, 342, 361, 409, 451, 464, 470, 471, 516, 573 578 mignonette 361, 383, 471, 517 milk-weed 226, 368 mint 275, 415	crates not returnable 551
Honey Extractors-	milk-weed	294, 312
always necessary in an apiary.	mint 273, 415 motherwort .50, 80, 339, 361, 464, 471, 483 .516 mustard .50, 80 myrrh .91 oak .337, 516	experiences in selling. 195, 294, 532 533 forced sales injurious. 294, 236, 321 532
296, 312	myrrb	grading, assorting and ship-
tractor	0 0 0 0 0 0 0 0 0 0	hard-wood barrels, waxing of, 152 how to obtain uniform prices, 185, 233, 297, 321, 512, 532 533 in California
	philaree	in England
Honey Surplus Sections—	polson ivy. 226 prickly ash 228, 516 prunes 36 raspberry 46, 80, 275, 515 reten vino 995	294, 321, 510
American sections in Europe. 555 best arrangement of	ratan vine	preparation for market. 152, 294, 321 552 prices obtained at home . 474, 534 ruled by inexperience . 237, 532 552 553
covers for marketing	saw palmetto	selling out-and-out for cash . 294 shipping extracted honey . 152, 193, 533 small packages desirable . 281, 533
queen laying in	sour-wood	small pine kegs, best for472, 333 supply and demand regulate prices
controversy concerning. 345 357. 387 removing from broad frames, 239 removing propolls from glass,	sunflower 80	Honey Statistics—
24	timothy 370 tullp, or poplar 31, 152, 325, 510 tullp, or poplar 47, 80, 152, 296, 52 206, 275, 355, 388, 340, 516, 517, 573 will plum 227, 518, willow 237, 71, 80, 515, 517, 573 yellow 237, 71, 80, 515, 517, 573 yellow 237, 238, 248, 248, 248, 248, 248, 248, 248, 24	bees and honey in Ohio
tool for glassing	willow	sales in Cincinnati, O.,

second how to prevent
or
575 felt blankets for 264
H. H. Flick's chaff pucking 314 Hosmer's theory of 255 how to pack with chaff. 334 in cellars. 43, 46, 50, 94, 178 251 455 405 406 406 406 406 406 406 406 406 406 406
The state of the s



